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MALDON
RURAL DISTRICT COUNCIL

Annual Report

OF THE
MEDICAL OFFICER OF HEALTH

(JOHN F. MACDONALD, M.D., D.P.H.)

FOR

1949

SOUTHEND-ON-SEA

W. H. Houldershaw, Ltd., Printers, 49-55, London Road.



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COUNCIL OFFICES,
LONDON ROAD,
CHELMSFORD

7th July, 1950.

**To the Chairman and Members of the
Maldon Rural District Council.**

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour of presenting for your consideration my Annual Report on the health and sanitary circumstances of your District for the year 1949.

The Birth Rate for the year 1949 was 16.3 per 1,000 of the population as against 17.5 for the previous year. The Death Rate was 13.2 as against 9.4 for the year 1948.

For assistance rendered in the preparation of this Report, I am indebted to Mr. Turner, Senior Sanitary Inspector, and to other colleagues.

To the Council, may I express my appreciation for their consideration.

I am,

Your obedient servant,

JOHN F. MACDONALD,

PUBLIC HEALTH OFFICERS.

Clerk to the Rural District Council L. H. Hiscott

Medical Officer of Health ... John F. Macdonald, M.D.,
Ch.B., D.P.H., who also acts
in this capacity for the Rural
District of Chelmsford.

*Clerk to Medical Officer of
Health* W. D. Hall. (Part Time)

Surveyor and Water Engineer ... I. M. Nicholson, M.I.Mun.E.,
A.M.I.S.E.

Consulting Surveyor ... W. Almond, A.R.San.I.

Senior Sanitary Inspector ... G. L. Turner, M.R.San.I.
Qualified Inspector of Meat
and other Foods.

Additional Sanitary Inspector ... L. F. Newnham, M.R.San.I.,
Qualified Inspector of Meat
and other Foods.

Housing Assistant ... V. A. Arnold.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.

Notifiable Diseases (other than Tuberculosis) during 1949.

One hundred and sixty-nine cases of notifiable diseases (exclusive of Tuberculosis) were notified during the year as compared with 321 for the previous year.

Notifiable Disease	Total Cases	Under 1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and over	Age unknown	Cases admitted to Hospital	Total Deaths
Scarlet Fever ...	11	—	—	1	1	1	7	—	—	—	1	—	—	—	4	—
Whooping Cough	15	2	1	—	2	1	6	3	—	—	—	—	—	—	—	—
Measles ...	109	3	7	16	13	15	47	4	—	1	1	—	1	1	—	—
Pneumonia ...	14	2	1	1	1	—	3	—	—	—	2	2	1	1	—	—
Food Poisoning ...	7	—	—	—	2	—	—	1	—	1	—	2	1	—	—	—
Eaundice ...	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—
Erysipelas...	8	—	—	—	—	—	—	—	—	—	3	2	3	—	1	—
Acute Poliomyelitis (Paralytic)	1	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—
Cerebro Spinal Fever	1	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—
Puerperal Pyrexia	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
TOTALS ...	169	7	9	18	19	17	63	9	—	4	9	6	6	2	7	—

Diphtheria Immunisation. This is administered by the County Council.

Tuberculosis.

New Cases and Mortality during 1949.

Particulars are given in the following table of new cases of Tuberculosis and of deaths from the disease in the area during 1949.

Age Groups			* New Cases				Deaths			
			Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
			M.	F.	M.	F.	M.	F.	M.	F.
Under 1	...	...	—	—	—	—	—	—	—	—
1—5	...	...	—	1	3	—	—	—	1	—
5—10	...	...	2	1	—	—	—	—	—	—
10—15	...	...	—	—	—	—	—	—	—	—
15—20	...	...	—	—	—	—	—	—	—	—
20—25	...	...	1	—	—	—	—	—	—	—
25—35	...	...	—	—	—	—	—	—	—	—
35—45	...	...	—	1	—	—	—	—	—	—
45—55	...	...	—	—	—	—	2	—	—	—
55—65	...	...	1	—	—	—	1	—	—	—
65 and over	...	...	—	—	—	—	2	—	—	—
TOTALS	...	...	5	2	3	—	5	—	1	—

* Not including cases of Tuberculosis removed into the district during the year which had been previously notified elsewhere.

Distribution of Infectious Diseases, 1949.

Table showing Local Distribution of Cases Notified during the year 1949.

PARISH	Pneumonia	Measles	Erysipelas	Food Poisoning	Whooping Cough	Scarlet Fever	Cerebro Spinal Fever	Jaundice	Acute Poliomyelitis	Puerperal Pyrexia	Pulmonary Tuberculosis	Other Forms of Tuberculosis	TOTALS
Althorne ...	3	8	2	—	1	—	—	—	—	—	—	1	15
Asheldham ...	—	4	—	—	—	1	—	—	—	—	—	—	5
Bradwell-on-Sea ...	—	3	—	—	—	1	—	—	—	—	—	—	4
Great Braxted ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Little Braxted ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Cold Norton ...	1	16	1	2	—	—	—	—	—	—	—	—	20
Dengie ...	—	—	—	—	—	—	—	—	—	—	—	—	—
North Fambridge ...	—	1	—	—	—	—	—	—	—	—	1	—	2
Goldhanger... ..	—	14	—	—	7	—	—	—	—	—	—	—	21
Hazeleigh ...	—	1	—	—	—	—	—	—	—	—	—	—	1
Langford ...	—	3	—	—	—	—	—	—	—	—	—	—	3
Latchingdon ...	2	4	—	—	—	—	—	—	—	—	—	—	6
Mayland ...	—	2	—	—	—	—	—	—	—	1	—	—	3
Mundon ...	—	9	—	2	—	—	—	—	—	—	—	—	11
Purleigh ...	1	3	1	1	—	—	—	—	1	—	—	—	7
St. Lawrence ...	—	2	—	—	—	1	—	—	—	—	—	1	4
Southminster ...	2	10	—	—	—	1	—	—	—	—	—	—	13
Stow Maries ...	2	7	—	—	—	1	—	—	—	—	—	—	10
Steeple ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Tillingham ...	2	2	2	—	1	1	—	—	—	—	1	—	9
Tollesbury ...	—	—	—	—	—	3	—	2	—	—	—	1	6
Tolleshunt D'Arcy ...	—	—	—	—	—	—	—	—	—	—	1	—	1
Tolleshunt Knights ...	—	—	—	—	—	2	—	—	—	—	1	—	3
Tolleshunt Major ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Totham ...	—	3	—	1	3	—	—	—	—	—	1	—	8
Little Totham ...	1	2	—	—	—	—	—	—	—	—	1	—	4
Ulting ...	—	—	—	—	1	—	—	—	—	—	—	—	1
Wickham Bishops ...	—	7	—	1	—	—	—	—	—	—	—	—	8
Woodham Mortimer ...	—	8	—	—	—	—	1	—	—	—	—	—	9
Woodham Walter ...	—	—	2	—	2	—	—	—	—	—	1	—	5
TOTALS ...	14	109	8	7	15	11	1	2	1	1	7	3	179

The 7 Food Poisoning notifications were related to sporadic cases of diarrhoea.

GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

As from 5th July, 1948, all hospitals providing treatment for patients in the area have been transferred to the North-East Metropolitan Regional Hospital Board (Group 18).

INSTITUTIONAL PROVISION FOR UNMARRIED MOTHERS, ILLEGITIMATE INFANTS AND HOMELESS CHILDREN IN THE AREA, is provided by the Essex County Council.

AMBULANCE FACILITIES.

These are provided free to patients by the Essex County Council.

The ambulance depot for the area is at the Fire Station, London Road, Maldon.

CLINICS AND TREATMENT CENTRES (provided by the County Council).

Tuberculosis Dispensary :

Combined Treatment Centre, Wantz Chase, Maldon ;
2nd and 4th Thursdays 10 a.m.—12 noon.

Maternity and Child Welfare Centres :

Mayland	Old School, Upper Mayland	1st Thursday in each month 2.30 p.m.	Dr. A. Wyatt
Bradwell- on-sea	Village Hall	1st Wednesday in each month 2.30 p.m.	Dr. A. Wyatt
South- minster	Baptist Chapel School Room	4th Monday in each month 2 p.m.	Dr. A. Wyatt
Tollesbury	Infant School	1st and 3rd Tuesdays in each month 2 p.m.	Dr. A. Wyatt

Wickham Bishops	Church Room	2nd Wednesday in each month 2.30 p.m.	Dr. Mackenzie
Great Totham	Village Hall	4th Wednesday 2.30 p.m.	Weighing Centre
Cold Norton	Village Hall	4th Tuesday in each month 2 p.m.	Dr. A. Wyatt
Tillingham	Village Hall	2nd Thursday in each month 2.30 p.m.	Dr. A. Wyatt
Mundon	Victory Hall	4th Thursday in each month 2.30 p.m.	Dr. A. Wyatt
Heybridge	Waring Hall	2nd and 4th Tuesdays in each month 2.30 p.m.	Dr. A. Wyatt attends 2nd Tuesday
Maldon	Health Centre	Every Friday 2 p.m.	
*Woodham Walter	Women's Institute Club Room	3rd Thursday in each month 2.30 p.m.	Dr. A. Wyatt

*This Clinic has the Medical Officer in attendance only when there are 5 Thursdays in the month and the Clinic is held on that Thursday instead of 3rd Thursday.

Goldhanger	Village Hall	3rd Thursday in each month 2 p.m.	Dr. A. Wyatt
Tolleshunt D'Arcy	Village Hall	1st Thursday in each month 2.30 p.m.	Weighing Centre No Doctor

Maternity and Child Welfare Centres—contd.

Latchingdon Village Hall	4th Tuesday in each month 2 p.m. and 3 p.m. alter- nate months for 1 hour sessions	Dr. A. Wyatt
--------------------------	--	--------------

Great Braxted	Du Cane Arms	1st Wednesday in each month 2.30 p.m.	Weighing Centre
------------------	--------------	---	--------------------

Ante-Natal Clinics :

Health Centre, Wantz Chase, Maldon	1st and 3rd Tues- days in each month 9.30 a.m.	Dr. A. Wyatt
---------------------------------------	--	--------------

Infant School Tollesbury	3rd Monday 1.30 p.m.	Dr. A. Wyatt
-----------------------------	-------------------------	--------------

Village Hall, Goldhanger	3rd Thursday in each month 2 p.m.	Dr. A. Wyatt
-----------------------------	--------------------------------------	--------------

Women's Welfare Clinic :

Health Centre, Wantz Chase, Maldon	1st Monday 1.30 p.m.	Dr. A. Wyatt
---------------------------------------	-------------------------	--------------

Ante-Natal Patients seen prior to Child Welfare Centre on
1st Tuesday at Tollesbury.

School Clinics :

Orthopaedic After Treatment Centre	Health Centre, Wantz Chase, Maldon	2nd and 4th Tues- days (Temporarily) in each month 2 p.m. by appointment.
---------------------------------------	--	--

Minor Ailments Clinic	Health Centre, Wantz Chase,	Fridays 9.30 a.m. —12 noon.
-----------------------	--------------------------------	--------------------------------

Dental and Eye Clinics are also held at the Maldon Health Centre and other places in the district as and when required.

For operative treatment for the removal of Adenoids and enlarged Tonsils arrangements have been made by the Essex County Education Committee at the following hospitals:—

Chelmsford and Essex, Chelmsford; St. John's, Chelmsford; and Essex County, Colchester.

Treatment Centres for Venereal Diseases:

These are situated at Chelmsford and Colchester Hospitals Oldchurch County Hospital, Romford, and a number of London General Hospitals.

PROFESSIONAL NURSING IN THE HOME.

(a) General. No arrangements have been made by the District Council, but for General Nursing there are a number of local Nursing Associations throughout the district which employ nurse midwives. These are under the supervision of the County Council and the District Council has no direct or indirect control over these Associations.

(b) Infectious Diseases. No arrangements have been made by the District Council.

HOME HELPS. Are provided through the County Council.

MIDWIVES. None is subsidized by the District Council. There were 9 midwives practising in the district at the end of 1949. Of these 8 are district nurses and 1 is in private practice.

LABORATORY FACILITIES. These services are provided by the Essex County Council and Medical Research Council.

INSPECTION AND SUPERVISION OF FOOD.

Milk Supply.

Under the Milk and Dairies Regulations, 1949, the control and supervision of the 183 milk producers in the district was transferred as from 1st October, 1949 to the Ministry of Agriculture and Fisheries.

The remaining 16 purely distributors in the district are supervised by the District Council.

Meat and Other Foods.

There are 7 slaughter houses in the district, but owing to Ministry of Food control and centralising of slaughtering, these are used in the main, for the killing of pigs, under the Ministry of Food Domestic Suppliers' scheme.

Routine inspections were made, during the year, of these premises.

WATER SUPPLY

By the end of 1949 a piped water supply from the mains owned by the District Council was available to 90 per cent of the population. The figures for each parish are set out in the table on page 14.

The supply is augmented from three local works :—

Springs at Woodham Walter.

Springs at Asheldam.

Deep well at Tollesbury.

The supplies from these three works are chlorinated.

The analysis of the water from the deep well at Tollesbury shows that it contains more fluorine than is desirable.

Excess of fluorine in a domestic water supply has a deleterious effect on the teeth. This is well illustrated in the following observations of Dr. J. G. Madden of Tollesbury :—

“ When the deep well of Tollesbury was sunk in 1914 most of the village had the water laid on, or had access to it. This water contained 3-4 parts in a million of Fluorine.

Subsequently to this, the children born in the village developed marked mottling of their teeth, with early caries.

By 1938, there were a large number of young men and women, who had to have their teeth removed and be supplied with dentures because of this. It varied in its intensity partly because some people continued to use their own wells and of a natural resistance in certain people, to the absorption of Fluorine.

In the early thirties, it was observed that many of the small children, in the village, had badly browned mottled teeth and can still be noticed, even, after the children have grown up.

During 1938, the Tollesbury water mains were connected to the South Essex Water Company's supply. From then onwards, the water supply to householders in Tollesbury was a mixture of water from the deep well and South-Essex supply. This resulted in a considerable reduction in the amount of fluorine in the water as taken from the householders' taps.

Since that time, there has been a marked change in the appearance of the teeth of all the children. The worst that is now seen appears to be small white patches on the enamel, which does not show much, except on close inspection.

The permanent teeth, of most children born since 1938, appear to be sound and do not show signs of early caries.

To confine the water supply of Tollesbury, wholly, to that obtained from the deep well, would certainly mean that the teeth of the future children, in the village, would be badly marked and all would develop early caries."

The Council in considering any alteration in the water supply to Tollesbury, no doubt, will take this practical medical experience into consideration.

Under the Southend Waterworks Act and the South Essex Waterworks Act, the District Council has certain legal rights to be supplied by these companies with a bulk supply of water. The following table gives details of the water supplied to the District for the year ending 31st March, 1950 :—

Source of Supply	Total Gallons	Average Daily	Cost £	Cost per 1,000 galls d.
South Essex Waterworks Co. ...	130,323,000	384,000	5,781	10.65
Southend Waterworks Co. ...	9,030,000	25,000	723	19.23
Lexden and Winstree ...	7,205,000	19,000	451	15.00
Total Amount Purchased ...	146,558,000	428,000	6,955	11.32
Asheldam ...	6,781,000	19,000	405	14.23
Tollesbury ...	2,414,000	8,000	393	39.07
Woodham Walter ...	22,591,000	68,000	751	7.97
Total ...	31,786,000	95,000	1,549	11.69
Total supplied from All Sources	178,344,000	496,000	8,505	11.44

**RECORD OF HABITABLE HOUSES AND WATER
SUPPLY AS AT 31st DECEMBER, 1949.**

PARISH	Habitable Houses (not includ- ing Huts or Vans)	No. of Houses on Domestic Water Supply	Within 100 yds. of water main but not supplied	Where piped water supply is not available	War Services
Althorne ...	153	151	—	3	—
Asheldam ...	52	37	5	10	—
Bradwell-on-Sea ...	242	202	33	12	2
Braxted, Great ...	117	45	18	54	—
Braxted, Little ...	40	40	—	2	—
Cold Norton ...	128	128	1	—	—
Dengie ...	47	41	3	4	—
Fambridge, North ...	97	94	—	5	—
Goldhanger ...	183	155	20	9	—
Hazeleigh ...	39	40	—	—	—
Langford ...	49	33	—	16	—
Latchingdon ...	202	202	—	—	—
Mayland ...	142	143	—	5	—
Mundon ...	104	104	—	—	—
Purleigh ...	295	293	—	3	—
St. Lawrence ...	79	52	—	27	—
Southminster ...	486	456	—	30	—
Steeple ...	127	96	7	24	—
Stow Maries ...	57	57	—	—	—
Tillingham ...	258	208	19	31	2
Tollesbury ...	552	540	2	10	—
Tolls. D'Arcy ...	260	189	31	40	—
Tolls. Knights ...	134	133	1	—	—
Tolls. Major ...	121	90	11	20	—
Totham, Great ...	383	333	32	18	—
Totham, Little ...	87	65	9	13	—
Ultin ...	44	16	—	28	—
Wickham Bishops ...	265	230	24	11	—
Woodham Mortimer...	93	88	—	5	—
Woodham Walter ...	175	107	5	63	—
TOTALS ...	5011	4347	221	443	4

**Sample of Water from the Engine House, Woodham Walter
Pumping Station.**

					<i>Chemical Results in Parts per Million</i>
Appearance	...	...	...	...	Bright with a very few mineral particles
Turbidity (Silica Scale)	...	...	...	...	less than 5
Colour (Hazen)	...	...	...	...	Nil
Odour	...	...	...	...	Nil
Reaction pH	...	...	...	...	6.5
Free Carbon Dioxide	...	...	...	...	11.0
Electric Conductivity at 20° C.	...	...	...	...	350
Total Solids, dried at 180° C.	...	...	...	...	235
Chlorine in Chlorides	...	...	...	...	30
Alkalinity as in Calcium Carbonate	...	...	...	...	40
Hardness : Total	...	...	...	...	120
Permanent	...	...	...	...	80 Non-Carbonate
Temporary	...	...	...	...	40 Carbonate
Nitrogen in Nitrates	...	...	...	...	7.6
Nitrogen in Nitrites	...	...	...	...	less than 0.01
Free Ammonia	...	...	...	...	0.00
Albuminoid Ammonia	...	...	...	...	0.00
Oxygen absorbed in 4 hours at 27° C.	...	...	...	...	0.00
Residual Chlorine	...	...	...	...	0.08
Metals	...	...	...	...	Absent
Fluorine	...	...	...	...	less than 0.1

Bacteriological Results.

1 day at 37° C.	Nil
2 days at 37° C.	Nil
3 days at 20° C.	Nil

Presumptive Coliform Reaction :	Absent from 100ml.
Bact. coli. :	Absent from 100ml.
Cl. Welchii Reaction :	Absent from 100ml.

Report.

This sample is practically clear and bright in appearance, free from metals, and has a reaction on the alkaline side of neutrality. The water has very moderate hardness, contains no excess of saline or mineral constituents in solution and is of very satisfactory organic quality and bacterial purity. These results are consistent with a pure and wholesome water suitable for public supply purposes.

SOUTH ESSEX WATERWORKS COMPANY

Recent Analyses of Samples of Water Pumped from the Works at Langham and Layer-de-la-Haye.

(CHEMICAL RESULTS IN PARTS PER MILLION)

	Langham	Layer-de-la-Haye
Appearance ...	Clear and bright	Clear and bright
Colour (Hazen) ...	Under 10	Under 10
Odour and Taste ...	Nil	Nil
Total Solid Residue (180° C.) ...	533	393
pH Value ...	7.4	7.3
Residual Chlorine (Cl.)	0.22	0.22
Chlorine present as Chloride ...	82	42
Nitrate Nitrogen ...	2.5	2.3
Nitrite Nitrogen ...	Nil	Nil
Hardness, Non-Carbonate ...	106	180
Hardness, Carbonate	232	140
Hardness, Total ...	338	320
Ammonia, free (NH ₃)	0.22	0.10
Albuminoid nitrogen	0.08	0.12
Oxygen absorbed from permanganate (4 hrs. 27° C.)	0.80	1.17
Colony Count per ml. on Agar 1 day at 37°C	4	13
Ditto 3 or 4 days at 20°C. ...	35 (3 days)	55 (4 days)
Presumptive Coli-aerogenes count per 100 ml. ...	0	0
Bact. coli Count per 100 ml. ...	0	0
Cl. Welchii reaction		
Present ...	10 ml.	100 ml.
Absent ...	1 ml.	10 ml.

Sample of Water from the Deep Well, Tollesbury.

					<i>Chemical Results in Parts per Million</i>
Appearance	...	...	...	...	Faint opalescence with a very slight flocculent deposit of iron oxide together with traces of Galli- onella.
Turbidity (Silica Scale)			...	...	less than 5
Colour (Hazen)	...	...	...	...	less than 10
Odour	...	...	...	...	Nil (taste slightly saline)
Reaction pH	...	...	...	...	8.1
Free Carbon Dioxide	...	...	...	...	4.0
Electric Conductivity at 20° C.				...	2,900
Total Solids, dried at 180° C.	...			...	1,930
Chlorine in Chlorides	...	...	...	...	680
Alkalinity as in Calcium Carbonate	...			...	380
Hardness : Total	...	...	...	...	70
Permanent		...	...	...	Nil Non-Carbonate
Temporary		...	...	...	70 Carbonate
Nitrogen in Nitrates	...	...	...	...	1.0
Nitrogen in Nitrites	...	...	...	...	0.01
Free Ammonia	...	...	...	...	0.40
Albuminoid Ammonia	...	...	...	...	0.00
Oxygen absorbed in 4 hrs. at 27° C.	...			...	0.50
Residual Chlorine	...	...	...	...	Absent
Metals—Iron	...	...	...	...	0.24
Other Metals	...	...	...	...	Absent
Fluorine	...	...	...	...	4.0

Report.

This sample is reasonably clear and bright in appearance, containing only a few particles in suspension. A minute trace of iron is present, but it is free from other metals. The water is very faintly alkaline in reaction and fairly soft in character, but it has a high content of saline and mineral constituents in solution. Its organic quality is very satisfactory.

These results are consistent with a water which, from the aspect of the chemical analysis, is wholesome in character and suitable for drinking and domestic purposes, but it has the disadvantage of a very slight taste while the content of fluorine is greater than desirable.

Sample of Water from Asheldham Pumping Station.

					<i>Chemical Results in Parts per Million</i>
Appearance	...	...	...	...	Bright with a few mineral particles
Turbidity (Silica Scale)			...	...	less than 5
Colour (Hazen)	...	...	...	...	Nil
Odour	...	...	...	...	Nil
Reaction pH	...	...	...	...	6.1
Free Carbon Dioxide	...	...	...	...	14
Electric Conductivity at 20° C.				...	400
Total Solids, dried at 180° C.	...	...	...	...	270
Chlorine in Chlorides	...	...	...	...	32
Alkalinity as in Calcium Carbonate	...	...	...	...	12
Hardness: Total	...	...	...	...	140
Permanent			...	...	128 Non-Carbonate
Temporary			...	...	12 Carbonate
Nitrogen in Nitrates	...	...	...	...	13
Nitrogen in Nitrites	...	...	...	...	less than 0.01
Free Ammonia	...	...	...	...	0.00
Albuminoid Ammonia	...	...	...	...	0.00
Oxygen absorbed in 4 hrs. at 27° C.					0.05
Fluorine	...	...	...	...	less than 0.1
Metals	...	...	...	...	Iron 0.05
Other Metals	...	...	...	...	Absent

Bacteriological Results.

Number of Colonies developing on Agar per c.c. or ml. in:

1 day at 37° C.	Nil
2 days at 37° C.	1 per ml.
3 days at 20° C.	200 per ml.

Presumptive Coliform Reaction Absent from 100 ml.

Bact. coli.: Absent from 100ml.

Cl. Welchii Reaction Absent from 100ml.

Report.

The sample is practically clear and bright in appearance and free from metals apart from a negligible trace of iron, although as the water is faintly acid in reaction, a corrosive tendency towards metals would be anticipated, and in view of the low alkalinity it may be plumbo solvent. The water has a very moderate hardness, contains no excess of saline or mineral constituents in solution, and is of satisfactory organic and bacterial purity. These results are consistent with a water which is wholesome in character and suitable for drinking and domestic purposes, but the use of lead in connection with this supply would be inadvisable.

Sample of Water from the Mains of the Southend Water-works Company.

					<i>Chemical Results in Parts per Million</i>
Appearance	...	...	...	...	Clear and Bright
Colour	...	...	...	...	Less than 10
Odour	...	...	...	...	Nil
Reaction pH	...	...	...	...	8.6
Free Carbolic Acid	...	...	...	...	Nil
Electric Conductivity at 20° C.	...	...	...	...	570
Total Solids, dried at 180° C.	...	...	...	...	380
Chlorine in Chlorides	...	...	...	...	48
Alkalinity as Calcium Carbonate	...	...	...	...	10
Hardness: Total	...	...	...	...	150
Nitrogen in Nitrates	...	...	...	...	7.2
Nitrogen in Nitrites	...	...	...	...	less than 0.01
Free Ammonia	...	...	...	...	0.036
Ammoniacal Nitrogen	...	...	...	...	Nil
Metals	...	...	...	...	Absent

Bacteriological Results.

Number of Colonies developing on Agar per c.c. or ml. in :

1 day at 37° C. Nil

2 days at 37° C. 1

3 days at 20° C. 1

Presumptive Coliform Reaction :

Present in —.

Absent from 100ml.

Bact. coli. :

Present in —:

Absent from 100ml.

Cl. Welchii Reaction :

Present in 100ml.

Absent from 10ml.

Report.

This sample is clear and bright in appearance, faintly alkaline in reaction and free from metals. The hardness of the water is moderate and it is free from any excess of mineral and saline constituents in solution. It is of satisfactory organic quality and of a high standard of bacterial purity.

These results are indicative of a water which is pure and wholesome in character and suitable for public supply purposes.

RIVERS AND STREAMS.

The Rivers Blackwater and Chelmer flow through the district. Neither of these rivers receives polluting matter to any extent while flowing through the Maldon Rural District. The Chelmsford Corporation Water Act, 1923, authorises the Corporation of Chelmsford to abstract water from the River Chelmer near Sandford Mill in the Rural District of Chelmsford—the quantity not to exceed 1,000,000 gallons per day. The Southend Waterworks Act, 1924, authorises the Southend Waterworks Company to abstract water from the River Chelmer near Rushes Lock and from the River Blackwater at Langford. The Southend Waterworks Act provides that the effluent from the Chelmsford Joint Sewerage Works be carried by a pipe past the point of intake at Rushes Lock and the effluent from the Witham Sewage Works beyond the point of intake from the River Blackwater at Langford. The discharge of such large volumes of sewage effluent into the rivers after a good deal of water has been extracted may cause a nuisance.

DRAINAGE AND SEWERAGE.

There are sewers in the parishes of Southminster, Tillingham, Tolleshunt D'Arcy, Tollesbury and Great Totham, (Aug. 1949). Full use is not made of these Sewers. It is doubtful if they are capable of dealing with all the sewage when existing pail closets are converted into water closets.

The Council have under consideration plans of sewerage schemes for the more populous areas of the district.

The consulting Engineers are Messrs. Lemon and Blizzard.

Owing to the high cost of Sewerage and Sewage Disposal for the parish of Latchingdon, the Ministry of Health was unable to sanction the construction of the works. It is again receiving the consideration of the Council.

HOUSING

Statistics for the Year, 1949.

Number of new houses erected during the year :—

Total	106
(i) By the Local Authority	77
(ii) By other bodies and persons	29

The number of applicants for council houses is 400, and no less than 200 are classified as urgent due to :—(a) sharing accommodation, (b) temporary accommodation or living in unfit houses, (c) overcrowded, (d) eviction orders, (e) agricultural workers recommended by the Agricultural Executive Committee.

Further housing accommodation depends upon the number allocated by the Ministry of Health. It is anticipated that the number will be about 60 per annum, of which 12 will be allocated to private persons, leaving 48 Council houses to be erected each year. During the next 3 years it is anticipated that about 180 houses will be erected by the Council.

The following table classifies the houses erected and owned by the District Council into Parlour and Non-Parlour types.

PARISH	Parlour Type	Non-Parlour Type	Totals
Althorne	—	—	—
Asheldham	5	2	7
Bradwell-on-Sea	12	6	18
Braxted, Great	8	6	14
Braxted, Little	—	4	4
Cold Norton	—	10	10
Dengie	—	8	8
Fambridge, North	—	—	—
Goldhanger	8	38	46
Hazeleigh	—	6	6
Langford	—	—	—
Latchingdon	8	26	34
Mayland	—	12	12
Mundon	10	12	22
Purleigh	8	18	26
St. Lawrence	—	—	—
Southminster	32	28	60
Steeple	10	12	22
Stow Maries	6	12	18
Tillingham	16	6	22
Tollesbury	32	20	52
Tolleshunt D'Arcy	24	16	40
Tolleshunt Knights	—	10	10
Tolleshunt Major	6	12	18
Totham, Great	31	29	60
Totham, Little	4	6	10
Ulting	—	—	—
Wickham Bishops	21	26	47
Woodham Mortimer	4	6	10
Woodham Walter	14	12	26
TOTALS	259	343	602

The total includes six cottages erected by Parish Council in Tolleshunt D'Arcy; six Coastguard cottages (parlour) re-erected on a new site in Bradwell-on-Sea. Buildings at Asheldham converted into three dwellings.

Nine cottages (non-parlour) purchased by Council (Wickham Bishops). 18 Agricultural cottages (parlour): Asheldham 4, Southminster 4, Steeple 6, Tolleshunt D'Arcy 4.

**Table showing Census Population 1921 and 1931, and
Number of Houses Census 1931 and December, 1949.**

PARISH	Area in statute acres (land and inland water)	Tidal water and fore- shore	Num- ber of Houses 1931	Census Population		Number of Houses at end of Dec. 1949 excl. of hutments
				1921	1931	
Althorne ...	2080	255	117	401	390	152
Asheldham ...	1310	—	42	203	168	52
Bradwell-on-Sea ...	5221	4230	188	747	657	242
Braxted Great ...	2634	—	85	283	282	117
Braxted Little ...	622	—	36	109	116	40
Cold Norton ...	1692	—	102	326	384	128
Dengie ...	2856	1186	54	181	192	47
Fambridge North...	1242	107	50	177	168	97
Goldhanger ...	1622	—	107	361	353	183
Hazeleigh ...	991	—	33	121	114	39
Langford ...	991	3	49	167	169	49
Latchingdon ...	3992	207	122	420	419	202
Mayland ...	1870	—	99	343	360	142
Mundon ...	3076	—	60	269	251	104
Purleigh ...	5771	87	223	857	770	295
St. Lawrence ...	2139	324	20	132	71	79
Southminster ...	6512	828	439	1592	1403	486
Steeple ...	2709	47	94	391	343	127
Stow Maries ...	1610	82	48	147	165	57
Tillingham ...	4928	2593	211	836	670	258
Tollesbury ...	4839	2019	467	1721	1694	552
Tolleshunt D'Arcy...	4104	415	236	780	748	260
Tolleshunt Knights	1926	—	78	235	252	134
Tolleshunt Major ...	2253	2	96	338	370	121
Totham Great ...	3589	—	286	973	982	383
Totham Little ...	1281	—	85	301	293	87
Ulting ...	1034	—	37	144	143	44
Wickham Bishops...	1606	—	191	498	639	265
Woodham Mortimer	1387	—	69	229	268	93
Woodham Walter ...	2620	—	141	612	514	175
TOTALS ...	78507	12385	3865	13894	13348	5011

PUBLIC CLEANSING.

At the end of 1949 scavenging was undertaken by the District Council through contractors as follows :—

Althorne	...	...	Removal of contents of pail closets.
Goldhanger	...	...	Removal of contents of pail closets.
Mayland	...	...	Removal of contents of pail closets.
Southminster	...	...	Removal of contents of pail closets and house refuse.
Steeple	...	...	Removal of contents of pail closets.
Tollesbury	...	...	Removal of contents of pail closets and house refuse.
Tolleshunt D'Arcy	...	...	Removal of contents of pail closets and house refuse.
Woodham Walter	...	...	Removal of contents of pail closets.

Owing to difficulty of labour these services were curtailed.

On the whole these contractors carry out the work satisfactorily, but the time has approached when the District Council should undertake scavenging over a much larger area.

In addition to the above, a monthly collection of tins, bottles and similar refuse in 28 parishes is undertaken.

SANITARY INSPECTION OF THE AREA.

The following table, prepared by the Sanitary Inspector is a classified statement of the number of premises visited, the defects or nuisances discovered, and the action and result of action taken in regard to these.

SANITARY INSPECTION OF THE AREA.

INSPECTIONS	NOTICES					
	Number	Informal	Formal	Total compiled with	Outstanding at the end of year	
Nature					Informal	Formal
Dwelling Houses :						
Under Housing Regs.	78	—	—	—	—	—
Primary Inspections Re :						
Structural Defects	174	27	—	17	10	—
Nuisances	119	12	—	7	5	—
Overcrowding	302	—	—	—	—	—
Dirty conditions	55	—	—	—	—	—
Re Inspections :						
Under Housing Regs.	6	—	—	—	—	—
Re Structural defects	47	—	—	—	—	—
Nuisances	33	—	—	—	—	—
Overcrowding	21	—	—	—	—	—
Dirty Conditions	28	—	—	—	—	—
Verminous Premises :						
Rats and Mice	96	—	—	—	—	—
Other Pests	44	4	—	4	—	—
Infectious Diseases						
Inquiries	76	—	—	—	—	—
Disinfections	11	—	—	—	—	—
Sewage and Drainage :						
House Drainage Inspections	350	17	—	14	3	—
Tests	67	—	—	—	—	—
Other Forms Inspections	67	5	—	4	1	—
Tests	18	—	—	—	—	—
Inspections re cesspools	160	14	—	6	8	—
Inspections re sewerage	140	—	—	—	—	—
Sanitary Conveniences :						
Dwelling Houses	293	2	—	1	1	—
Other Premises	70	4	—	1	3	—
Water Supply :						
Samples taken	11	17	—	14	3	—
Other visits	287	—	—	—	—	—
Milk and Dairies Inspections :						
Cowsheds	50	—	—	—	—	—
Dairies	93	—	—	1	—	—
Milk samples taken	—	—	—	—	—	—
Food Inspection :						
Meat	35	—	—	—	—	—
Other Foods	46	—	—	—	—	—
Inspections Re :						
Licensed Premises	10	—	—	—	—	—
Offices	—	—	—	—	—	—
Bakehouses	23	—	—	—	—	—
Slaughterhouses	45	—	—	—	—	—
Butchers' Shops	53	—	—	—	—	—
Food Shops	55	1	—	1	—	—
Other Shops	31	—	—	—	—	—
Ice Cream, Man. Premises	10	—	—	—	—	—
Ice Cream, Dealers' Premises	22	—	—	—	—	—
Man. Food Premises	5	—	—	—	—	—
Restaurants	12	—	—	—	—	—
Factories with Mech.	13	—	—	—	—	—
Factories without Mech.	7	—	—	—	—	—
Workplaces	—	—	—	—	—	—
Outworkers Premises	35	—	—	—	—	—
Places of Entertainment	—	—	—	—	—	—
Knackers Yards	7	—	—	—	—	—
Refuse and Salvage	97	3	—	2	1	—
Schools	6	1	—	—	1	—
Rivers, Ditches and Streams	95	3	—	2	1	—
Swimming Pools	7	2	—	2	—	—
Movable Dwelling	108	—	—	—	—	—
Fried Fish Shops	8	—	—	—	—	—
Stables and Piggeries	5	—	—	—	—	—
Miscellaneous Inspections	1404	—	—	—	—	—
TOTALS	4835	112	—	76	37	—

Smoke Abatement. No cause for action occurred during the year.

Swimming Baths and Pools. There is a small open-air salt-water pool at Tollesbury,

Knackers' Yards. There is one in the district, situated in the parish of Purleigh.

Moveable Dwellings. During the year 7 licences to site moveable dwellings were granted under Section 269 of the Public Health Act, 1936.

Bakehouses. There are 14 in the district, situated in the following parishes :—Goldhanger 1, Purleigh 2, Southminster 1, Stow Maries 1, Tillingham 2, Tolleshunt D'Arey 1, Tollesbury 3, Wickham Bishops 2, and Woodham Walter 1.

Generally speaking these are kept clean, and minor improvements in construction have been made during the year, while washing has been carried out with regularity.

ADMINISTRATION OF THE FACTORIES ACT, 1937.

1.—**Inspections** for the purposes of provisions as to health.
Including inspections made by Sanitary Inspectors.

Premises	Number on Register	Number of		
		Inspections	Written Notices	Occupiers Prosecuted
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	39	13	—	—
(ii) Factories not included in (i) in which Section 7 is enforced by the Local Authority	25	7	—	—
(iii) Other Premises in which Section 7 is enforced by the Local Authority (excluding out-workers' premises)	Nil	Nil	—	—
TOTAL ...	64	20	—	—

2.—Cases in which Defects were found.

Particulars	Number in which defects were found				Number of Cases in which Prosecutions were Instituted
	Found	Remedied	Referred to H.M. Inspector	Referred by H.M. Inspector	
Want of Cleanliness (S.1)	—	—	—	—	—
Overcrowding (S.2) ...	—	—	—	—	—
Unreasonable Temperature (S.3)	—	—	—	—	—
Inadequate Ventilation (S.4)	—	—	—	—	—
Ineffective Drainage of Floors (S.6)	—	—	—	—	—
Sanitary Conveniences (S.7):					
Insufficient	2	2	—	—	—
Unsuitable or Defective	1	1	—	—	—
Not separate for sexes	1	1	—	—	—
Other Offences against the Act (not including offences relating to out-work)	—	—	—	—	—
TOTAL ...	4	4	—	—	—

OUTWORK (Sections 110-111)

Nature of Work	Section 110			Section 111		
	No. of out-workers in August list required by Sect. 110 (1) (c) (3)	No. of cases of default in sending lists to the Council	No. of prosecution for failure to supply lists	No. of instances unwholesome premises	Notices Served	Prosecutions
Wearing apparel						
Making etc.	11	—	—	—	—	—
Cleaning and washing ...	—	—	—	—	—	—
Artificial flowers ...	1	—	—	—	—	—
Total ...	12	—	—	—	—	—

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (acres)	...	...	78,507 (land and inland water)
Registrar General's estimate of civilian population June, 1949			14,480
Census Population, 1931	...	...	13,348 (new area)
Number of inhabited houses 1931 census	...	...	3,865
Estimated number of houses at end of 1949	...	...	5,011
Rateable Value at 1st April, 1949	...	...	£84,806
Product of a Penny Rate for the year ending 31st March, 1949	...	...	£348 13 1

Except in certain centres, the District is very sparsely populated. Nearly half of the population is directly or indirectly dependent upon agriculture, 43.6 per cent of the adult male population being directly employed in the industry.

EXTRACTS FROM VITAL STATISTICS OF THE YEAR

		Total	Males	Females	
Live Births	Legitimate	223	122	101	Birth Rate per 1,000 of the estimated resident population ... 16.3
	Illegitimate	13	4	9	
Still Births	Legitimate	6	4	2	Rate per 1,000 total (live and still) Births ... 25.4
	Illegitimate	—	—	—	
Deaths	...	192	114	78	Death Rate per 1,000 of the estimated resident population ... 13.2

Deaths from Puerperal causes:—

From Puerperal and Post-abortive sepsis	...	...	Nil
From other Maternal causes	...	...	Nil

Number of deaths of infants under 1 year of age:—

Males 3 (illegitimate Nil), Females 2 (illegitimate 2)

Total 5

Deaths of Infants under 1 year of age :—

Legitimate per 1,000 Legitimate Live Births	...	13
Illegitimate „ „ Illegitimate „ „	...	153
All Infants „ „ Live Births	...	21

Deaths from Cancer (all ages)	...	28
„ „ Measles (all ages)	...	1
„ „ Whooping Cough (all ages)	...	Nil
„ „ Diarrhoea (under 2 years of age)	...	1

The following tabular statements give details of the number of deaths classified according to age and cause :—

Age				Number of deaths			
				Occurring in district	Of non-residents occurring in district	Of residents occurring outside district	Allotted district
Under 1 year	...	...	...	—	—	5	5
1 and under 2	...	...	...	1	—	—	1
2 „ „ 5	...	...	...	—	—	1	1
5 „ „ 15	...	...	...	1	—	1	2
15 „ „ 25	...	...	...	—	—	2	2
25 „ „ 35	...	...	...	—	—	—	—
35 „ „ 45	...	...	...	4	2	2	4
45 „ „ 55	...	...	...	7	1	5	11
55 „ „ 65	...	...	...	10	1	8	17
65 „ „ 75	...	...	...	44	2	24	66
75 and over	...	...	...	56	—	27	83
TOTALS	...	...	...	123	6	75	192

Causes of Death	Males	Females	Totals
Typhoid and Paratyphoid Fever ...	—	—	—
Measles	1	—	1
Scarlet Fever	—	—	—
Whooping Cough	—	—	—
Diphtheria	—	—	—
Influenza	—	1	1
Acute Poliomyelitis and Polioencephalitis	—	—	—
Acute Inf. Encephalitis	—	—	—
Cerebro Spinal Fever	—	—	—
Tuberculosis of Respiratory System ...	5	—	5
Other Tuberculous Diseases	1	—	1
Syphilitic Diseases	1	—	1
Cancer	19	9	28
Diabetes	1	—	1
Intra Cranial vascular lesions	11	17	28
Heart Disease	46	29	75
Other Circulatory Diseases	5	6	11
Bronchitis	4	3	7
Pneumonia	1	4	5
Other Respiratory Diseases	2	1	3
Ulcer of Stomach or Duodenum	—	1	1
Diarrhoea (under 2 years)	1	—	1
Appendicitis	—	—	—
Other Digestive Diseases	1	1	2
Nephritis	—	—	—
Puerperal and Post Abortive Sepsis ...	—	—	—
Other Maternal causes	—	—	—
Malformation etc.	1	—	1
Premature Birth	2	2	4
Suicide	1	—	1
Road Traffic accidents	3	—	3
Other Violent causes	2	—	2
All other causes	6	4	10
Totals	114	78	192

**COMPARATIVE TABLE OF BIRTH AND DEATH RATES
DURING THE YEAR, 1949.**

	Rate per 1 000 civilian population		Deaths under 1 year per 1 000 registered live births
	Live Births	Deaths from all causes	
England and Wales ...	16.7	11.7	32
126 County Boroughs and Great Towns including London	18.7	12.0	37
148 Smaller Towns with Resident Population of from 25,000 to 50,000 (1931 Census)	18.0	11.6	30
Maldon Rural District ...	16.3	13.4	21

The natural increase in the population, namely, the excess in the number of live births over the number of deaths, is shown in the following tabular statement for each of the ten years 1939—1949.

Year	No. of Births	No. of Deaths	Natural Increase
1939 ...	154 ...	185 ...	—31
1940 ...	188 ...	207 ...	—19
1941 ...	202 ...	201 ...	+ 1
1942 ...	205 ...	196 ...	+ 9
1943 ...	193 ...	204 ...	—11
1944 ...	255 ...	174 ...	+81
1945 ...	214 ...	185 ...	+29
1946 ...	268 ...	204 ...	+64
1947 ...	259 ...	192 ...	+67
1948 ...	240 ...	135 ...	+105
1949 ...	223 ...	192 ...	+31